Seeing spin-2 symmetry in a vector current coupling term DOUG
SWEETSER, none — The Gravity and Electromagnetic (GEM) action to unify grav-
ity and EM will be reviewed, pointing out the errors made along the way. One subtle
issue involves the current coupling term, $J^u\,A_u$. One can do a Fourier transform of
the potential into a momentum space, then consider a current-current interaction,
J J$'$. The product of two currents, J* J$'$, has the phase for a spin 1 particle, the
photon. I demonstrate that (iJi)* J$'$ has the phase of a spin 2 particle, the graviton.
Both spin 1 and spin 2 particles are required for a unified field theory where like
electric charges repel and like mass charges attract.

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